



ZEP Manufacturing Company
 Acuity Specialty Products Group, Inc.
 P.O. Box 2015
 Atlanta, GA 30301
 1-877-I-BUY-ZEP (428-9937)
 www.zep.com

Material Safety Data Sheet and Safe Handling and Disposal Information

Section 1. Chemical Product and Company Identification

Product name **BIG ORANGE (LIQUID)**
 Product Use Industrial Solvent Degreaser
 Product Code **0415**
 Date of issue **03/24/05** **Supersedes 08/22/03**
 Emergency For MSDS Information:
 Telephone Acuity Specialty Products Group, Inc.
 Numbers Compliance Services 1-877-I-BUY-ZEP (428-9937)

For Medical Emergency
 INFOTRAC:
 (877) 541-2016 Toll Free - All Calls Recorded

For a Transportation Emergency
 CHEMTREC:
 (800) 424-9300 - All Calls Recorded
 In the District of Columbia (202) 483-7616

Printing date: 03/24/05

Prepared by Compliance Services Group
 Acuity Specialty Products Group
 1420 Seaboard Industrial Blvd.
 Atlanta, GA 30318

Section 2. Composition, Information on Ingredients

Name of Hazardous Ingredients	CAS #	% by Weight	Exposure Limits
D-LIMONENE; orange distillate; citrus terpene; cyclohexene, 1-methyl-4-(1-methylethenyl)-, (R)-	5989-27-5	>90	Not established

Section 3. Hazards Identification

Acute Effects

Routes of Entry Dermal contact. Eye contact. Inhalation.

- Skin** Hazardous in case of skin contact (irritant, sensitizer). Direct contact may cause irritation and redness. May cause allergic reactions to certain individuals. Skin inflammation is characterized by itching, scaling, or reddening.
- Eyes** Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.
- Inhalation** Hazardous in case of inhalation. Avoid breathing vapors or spray mists. Over-exposure by inhalation may cause respiratory irritation.
- Ingestion** Aspiration hazard if swallowed- can enter lungs and cause damage. No data on acute toxicity of the product when ingested.

HMIS

Health	1
Reactivity	0
Personal Protection	B

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse health effects are lessened by following all prescribed safety precautions, including use of proper personal protective equipment.

Carcinogenic Effects Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.
Chronic Effects Prolonged or repeated contact may dry skin and cause irritation. Defatting properties, may aggravate an existing dermatitis

See Toxicological Information (section 11)

Section 4. First Aid Measures

- Eye Contact** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
- Skin Contact** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.
- Inhalation** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion** Aspiration hazard if swallowed- can enter lungs and cause damage. If vomiting occurs, keep head lower than hips to help prevent aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

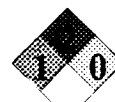
Section 5. Fire Fighting Measures

Flash Point Closed cup: 49.4°C (120.9°F). **Flammable Limits** Not determined.

Flammability COMBUSTIBLE.

Fire Hazard Combustible liquid and vapor. Keep away from heat, sparks and flame.

Fire-Fighting Procedures Use alcohol foam, water spray or fog. Cool closed containers exposed to fire with water. Fire-fighters should wear proper protective equipment.

**Section 6. Accidental Release Measures**

Spill Clean up Eliminate all ignition sources. Put on appropriate personal protective equipment (see Section 8). Absorb with an inert material and place in an appropriate waste disposal container. To clean the floor and all objects contaminated by this material, use detergent. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 7. Handling and Storage

Handling Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Do not ingest. Observe label precautions. Wash thoroughly after handling.

Storage Keep away from heat and direct sunlight. Avoid all possible sources of ignition (spark or flame). Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

Section 8. Exposure Controls, Personal Protection**Personal Protection****Protective Clothing (Pictograms)**

Eyes Safety glasses.

Body Gloves. Recommended: Neoprene gloves. Nitrile gloves. Rubber gloves.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s). Wear appropriate respirator when ventilation is inadequate.

**Section 9. Physical and Chemical Properties**

Physical State Liquid. **Color** Clear. Orange.

pH Not applicable. **Odor** Orange. (Strong.)

Boiling Point 170°C (338°F) **Vapor Pressure** 0.3 kPa (1.9 mmHg) (at 20°C)

Specific Gravity 0.85 (Water = 1) **Vapor Density** 4.7 (Air = 1)

Solubility Emulsifies in water. **Evaporation Rate** <1 compared to Water

VOC (Consumer) 789.37 (g/l). 6.59 lbs/gal
92.70%

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. Incompatible with some strong acids. Reactive with acidic clay. (i.e. clay absorbent)

Hazardous Polymerization Will not occur.

Hazardous Decomposition Products Carbon Dioxide, Carbon Monoxide and other organic materials..

Section 11. Toxicological Information

Toxicity to Animals d-Limonene:

ORAL (LD50): Acute: >5000 mg/kg [Rat].

DERMAL (LD50): Acute: >5000 mg/kg [Rabbit].

Section 12. Ecological Information

Ecotoxicity Not available.

Biodegradable/OECD Not available.

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste Stream Code: D001
Classification: - (Hazardous waste.)
Origin: - (RCRA waste.)

Consult your local or regional authorities.

Section 14. Transport Information**Proper shipping name** Not applicable.**DOT Classification** Not a DOT controlled material (United States).**UN number** Not applicable.

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

Section 15. Regulatory Information**U.S. Federal Regulations** SARA 313 toxic chemical notification and release reporting:

No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

All Components of this product are listed or exempt from listing on TSCA inventory.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.